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MONTANA FOREST PRODUCTS BULLETIN

Department of State Lands, Division of Forestry
2705 Spurgin Road, Missoula, Montana 59801
Ph: (406) 728-4300

GARY G. BROWN, State Forester

PAUL MOORE, Editor

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MARCH 1987

This bulletin is mailed primarily to individuals engaged in the Forest Products Industry in Montana. In addition, it is mailed to county agents, lumber brokers, wholesalers, dealers of sawmill and logging equipment, educators, and Montana Tree Farmers, as well as the Departments of Forestry in many states.

The purpose of this newsletter is to communicate information regarding the properties and uses of wood products, promote efficiency in the utilization of wood from the stump to the end product, and to serve as a information source for members of the forest products industry.

All persons receiving this newsletter are asked to examine their mailing address and advise this office of any corrections needed for proper mailing.

STONE CONTAINER & SOUTHWEST FOREST INDUSTRIES AGREE TO MERGE

Stone Container Corporation and Southwest Forest Industries. Inc. signed a definitive agreement of merger last month. Under the agreement, Stone will acquire the outstanding shares of Southwest Forest Industries and effect a merger with that company, announced Roger W. Stone, Chairman and Chief Executive Officer of Stone Container, and William A. Franke, Southwest Chairman and Chief Executive Officer.

Southwest, based in Phoenix, Arizona, had sales of $631.5 million in 1986. Their Snowflake, Arizona, paper mill manufactures linerboard and newsprint, and its Panama City, Florida, pulp & paper mill produces linerboard and market pulp. In addition, Southwest has 19 corrugated container plants, several plywood and veneer plants, a number of sawmills, and two short-line common carrier railroads. Southwest also owns approximately 334,000 acres of private fee timberland in Florida.

James E. Frew, Stone Container President and Chief Operating Officer, said, "Southwest's operations will be merged with those of Stone Container. Its linerboard production of approximately 440,000 tons per year and its container plant system will provide important location and distribution benefits to Stone Container."

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BPA SOLICITING PROPOSALS

The Department of Natural Resources and Conservation (DNRC), Energy Division, is seeking qualified parties to work on energy projects for 1987. These projects are funded through the Pacific Northwest and Alaska Biomass Energy Program. At least 12 project proposal areas will be reviewed ranging from Biomass Recovery Systems for Remote Alaska, to Indoor Air Quality Impacts of Residential Wood Combustion. The requests for these and other proposals should be available by mid-April according to Howard Haines, Program Engineer for the DNRC. Interested parties can be placed on the mailing list by contacting Gary Insley, Bonneville Power Administration, Mail Stop EPG, P.O. Box 3621, Portland, Oregon 97208-3621, or by contacting Howard Haines no later than March 31, 1987 at (406) 444-6697.

COMPUTER PROGRAM CALCULATES LUMBER SHIPPING WEIGHTS

Lumber Weight and Volume Program: This simple to use Lotus 1-2-3 spreadsheet program using the MS-DOS operating system calculates weight, cubic volume, and scribner board foot scale of lumber. The program was designed to estimate lumber shipping weights, however, it can also calculate board feet lost due to improper lumber trimming. The data input necessary to run the program is: lumber size(s), moisture content(s), and specific gravities. A copy of the program can be obtained by sending a formatted diskette to the Montana Forest Products Bulletin Editor. MS-DOS and Lotus 1-2-3 are not included.

DEPARTMENT OF STATE LANDS TIMBER SALE

Goat Rot Hill Timber Sale:

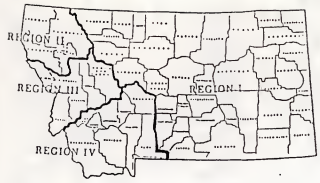
Sealed bids will be recieved by the Department of State Lands, Forestry Division, in Missoula, Montana, up to 2:00 p.m., March 30, 1987, for the merchantable sawtimber designated for cutting in the N½ and the N½SW¼ of Section 10, T23N-R17W. The Goat Rot Hill Timber Sale is estimated to contain 2 MBF western white pine, 6 MBF ponderosa pine, 144 MBF western larch, 181 MBF Douglas-fir, 17 MBF spruce, 11 MBF lodgepole pine, 5 MBF western red cedar, 14 MBF white fir (grand fir, subalpine fir, and western hemlock), 2 MBF dead (all species) for a total of 382 MBF, more or less.

Full particulars regarding the terms of the contract regulations governing the sale and bid forms may be obtained from the Forestry Division in Missoula, the Northwestern Land Office in Kalispell, or the Swan River State Forest Headquarters at Goat Creek.

Because of timing, this pubilication may not list all of the Department of State Lands timber sales available. For further information, check with the Department of State Lands, Forestry Division, in Missoula, or your local State Lands Office.

MONTANA LOG PRICE REPORT

The State-wide log price report on the following page catalogs recently delivered average log prices to sawmills by species using four geographical areas within Montana. Prices are provided by approximately 35 sawmills operating within the State. The report is compiled through the Extension Forester's Office, School of Forestry. University of Montana, Missoula. Montana 59812.



MONTANA SAWLOG AND VENEER LOG PRICE REPORT

MARCH - APRIL 1987

The following information is a summary breakdown of recent past average prices reportedly paid by primary wood processors for logs of the various species listed. These prices are not necessarily a reflection of current market prices. Fair market prices may vary a great deal based on log size, length, quality, contract size and terms, and a number of other factors. All information reported is recent average price per thousand board feet (MBF), Scribner Decimal rule, delivered to the mill site, unless otherwise noted.

Prices provided for this report by individual firms are treated as confidential disclosure of the firm's operations. Any requests for mill-specific data which have been provided for the log report will be denied.

SAWLOGS Scribner Dec C MBF	REGION I	*	REGION II	*	REGION III	*	REGION IV	*
	Avg. Low High		Avg. Low High		Avg. Low High		Avg. Low High	
Ponderosa pine	$105/$ 95/$110	F	$190/$180/$200	G	$200/$200/$200	G		
(Yellow)	$120/$110/$130	F	$214/$185/$225	G	$209/$185/$230	G/F		
(Bull)	$120/$110/$130	F	$147/$135/$160	G/P	$135/$ 90/$180	G/P		
Lodgepole pine	$150/$140/$160	F	$152/$140/$180	G/F	$151/$145/$155	G/F	$160/$160/$160	G
Douglas-fir	$137/$130/$140	F/P	$149/$130/$180	F/P	$152/$150/$160	G/F	$155/$155/$155	G
Western larch	$135/$130/$140	F	$146/$135/$160	G/P	$152/$150/$160	G/F		
Engelmann spruce			$155/$145/$175	G/P	$164/$150/$170	G/F	$155/$155/$155	G
Subalpine fir			$141/$135/$145	G/P	$144/$140/$150	G/P	$155/$155/$155	G
Grand fir			$140/$135/$145	G/P	$145/$140/$150	G/P		
Western red cedar			$170/$150/$180	F	$163/$150/$190	G/F		
Hemlock			$141/$135/$145	F/P	$141/$135/$150	G/P		
White pine			$221/$190/$275	G/F	$230/$200/$290	G		

VENEER LOGS Scribner Dec C MBF	STATEWIDE REPORT	
Species	Avg. Low High	Demand next 60 days*
Douglas-fir	$165/$165/$165	G/F
Ponderosa pine (bull)	$152/$150/$155	G
Western larch	$162/$155/$165	F/P

* Demand next 60 days

G = Good
F = Fair
P = Poor

MONTANA SPECIALTY PRODUCT

LOG PRICE REPORT

MARCH-APRIL 1987

The following information is a summary breakdown of recent past (highest and average) prices reportedly paid by primary wood processors for logs to be used in the manufacture of specialty wood products. These prices are not necessarily a reflection of current market prices. Fair market prices may vary a great deal based on log quality, contract size and terms, distance to market, green vs. dry logs, and a number of other factors. All information reported is recent average price per piece (log) delivered to the mill site, unless otherwise noted. Please contact buyers before cutting logs to obtain their detailed specifications (log length & diameter). Species other than those listed may be in demand.

Prices provided for this report by individual firms are treated as confidential disclosure of the firm's operations. Any requests for mill-specific data which have been provided for this report will be denied.

RAILS (Lodgepole pine only)

Prices are recorded as the highest reported price over the average reported price.

D.I.B.* small end (in.)	Length (feet)					
	<10	10	12	16	18	20
2.5-3.0	.40 .37	.50 .43	.70 .59	.90 .90		1.20 1.20
3.0-3.5	.80 .53	1.00 .67	1.20 .85	1.40 1.33	1.80 1.80	2.00 1.67
3.5-4.0	.80 .67	1.00 .82	1.20 .96	1.75 1.45	1.80 1.80	2.00 1.80
4.0-4.5	.80 .67	1.00 .86	1.20 1.00	2.00 1.59	1.80 1.80	2.00 1.80
4.5-5.0	1.00 .77	1.20 .98	1.40 1.10	2.00 1.69	2.00 2.00	8.00 5.10

*Diameter inside bark.

Demand next 120 days: good, fair, poor

POSTS (Lodgepole pine only)

Prices are recorded as the highest reported price over the average reported price.

D.I.B.* small end (in.)	Length (feet)		
	6.5	7.0	8.0
3.0	.45 .34	.40 .40	.40 .40
3.5	.60 .44	.45 .45	.55 .48
4.0	.60 .51	.45 .45	.80 .68
4.5	.60 .54	.75 .63	.80 .67
5.0	.60 .54	.75 .69	.85 .77
5.5	.60 .57	.80 .74	1.00 .86
6.0	.70 .61	1.00 .80	1.25 .96
8.0	.60 .60	1.00 .85	1.50 .99

*Diameter inside bark.

Demand next 120 days: good, fair, poor

POLES (Lodgepole pine and western larch only)

Prices are recorded as the highest reported price over the average reported price.

Top D.I.B.* (in.)	Length (feet)					
	10	16	20	25	30	35 - >40
3.0	.65 .65	1.25 1.13	1.20 1.20			
5.0-5.5	1.50 1.50	3.25 3.12	5.00 5.00	7.00 7.00	10.50 10.50	No prices reported
6.0-6.5	2.00 1.50	4.00 3.21	6.00 4.87	8.00 8.00	12.00 12.00	
7.0	2.00 2.00	5.00 4.50	6.00 4.87	8.00 6.65	12.00 9.37	
8.0	2.00 2.00	6.00 5.00	6.00 4.87	8.00 8.00	12.00 12.00	

*Diameter inside bark.

Demand next 120 days: good, fair, poor

HOUSE LOGS

Prices are recorded as the highest reported price followed by the average reported price (H/A).

Species*	Top diam. (in.)	Length (feet)			
		< 16	16-25	33-35	>35
LPP	8 9-12 13+	2.00/2.00 4.00/4.00 5.00/5.00	No prices reported		

*LPP = lodgepole pine.
Engelmann spruce and western white pine also in demand.
Most buyers purchase only rot-free, standing trees with a minimum of spiraling.

Demand next 120 days: good, fair, poor

REDUCING SAW KERF CAN IMPROVE LUMBER RECOVERY

You are probably aware that increased lumber recovery can often be gained by reducing saw kerfs, but convincing management to make changes requires concrete evidence. The following method developed by John White, from the U.S. Forest Service, can be used to quantify volume and dollar savings in the mill. This method is currently being used by some mills. To analyze numerous kerf option, this formula has been placed on the Lotus 1-2-3 spreadsheet program. If you would like a copy, contact the Marketing Bulletin Editor.

Mill Conditions:

Mill operates	240 shifts/year	Machine cuts	1,500 pieces/shift
Pieces average	3.750 in width	Old kerf	.218"
Average piece length	16.4'	New kerf	.156"
		Sawlines/piece	4.5

First, calculate cubic feet of sawdust per piece with old kerf:

$$V/P = \frac{\text{width}}{12} \times \frac{\text{kerf}}{12} \times \text{length} \times \text{sawlines} = \frac{3.750}{12} \times \frac{.218}{12} \times 16.4 \times 4.5 = .419 \text{ cu.ft.}$$

Annual volume = V/P x pieces/shift x shifts = .419 x 1500 x 240 = 150,840 cu.ft.

Since the kerf will be reduced from .218 to .156, the savings can be calculated:

$$S = \frac{\text{Old Kerf - New Kerf}}{\text{Old Kerf}} \qquad S = \frac{.218 - .156}{.218} = .284 \text{ or } 28.4\ \%$$

To calculate the annual fiber savings due to the kerf reduction:
Vs = S x Av = .218 x 150,840 = 42,800 cu.ft. (rounded)
If we recover this fiber as 40% lumber and 60% chips its value will be:

	Cubic Feet	Conv. Factor	Products	Value/Units		Total
Lumber	17,120	8.87 BF/CF	152 MBF	200/MBF	=	$30,370.00
Chips	25,860	.014 BDT/CF	359.52 BDT	40/BDT	=	$14,380.00
						$44,750.00

8.87 = Estimated Lumber Recovery Factor (LRF)
.014 28 cubic feet divided by 2000 lbs.

Since the fiber saved would have been sawdust, we must subtract its value as hog fuel.

Hog fuel = .014 Units/CF x 42,800 CF = 599 units
Hog fuel $ = 599 x $4/unit = $ 2,396.00

	$44,750.00
	2,396.00
TOTAL SAVINGS	$42,354.00

NEW RESOURCE CONSULTING FIRM ESTABLISHED

R. Ried Resource Services, a new private consulting company, has been established by Richard Ried, formerly with the Inland Forest Resource Council. Mr. Ried said the company will work on natural resource issues, conduct timber supply analysis studies, provide technical policy analyses, and general public relations activities. Mr. Ried has fourteen years of experience working for associations in California and Montana, and in addition has worked nine years for the Idaho State Lands Department. R. Ried Resource Services, is located in Missoula and may be contacted at (406) 251-2679.

TRACTOR-GRAPPLE FOR FARM FORESTRY BEING BUILT IN MOORE, MONTANA

By John Walkowiak

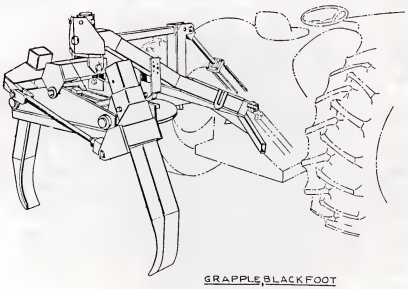
An October demonstration in Lewistown, Montana, of Forest Tree Thinning with the aid of a tractor-grapple gave Moore, Montana resident, Wayne Hannah, a business idea. Knowing that much of Montana, Idaho, and Washington possesses dense and stagnated forests of small trees in need of thinning, Hannah believes that there is a market for this tractor-grapple. With blue prints supplied by the U.S. Forest Service, Equipment Development Center, in Missoula, Montana, and the welding experience of Wayne Hannah, Frank Vanek, and Kieth Royston, the first Moore-built "Blackfoot Grapple" was produced.

The "Blackfoot Grapple" was first developed by Bill Potter of Greenough, Montana, and the University of Montana Lubrecht Experimental Forest staff to make forest thinning and small log operations economical. The grapple easily attaches to most farm tractors of over 30 horsepower, with a three point hitch and hydraulic hookups. According to several forestry experts, it makes the farm tractor into a "mini-skidder" at costs ranging from $2,200 to $3,000.

At a demonstration on Dick Koch's Ranch twelve miles east of Lewistown, the "Blackfoot Grapple" easily handled large tree-length logs (18 to 20 inches in diameter), groups of small trees, and made brush piling quick, simple, and complete. The grapple's ease of operation, maneuverability, and lifting power (2800 lbs.) makes it the perfect tool for thinning and logging.

"The nicest thing about the grapple," according to rancher Dick Koch, "is that it allows you to do your own logging using equipment you already have on hand." Hank Goetz, Manager of the University of Montana's Lubrecht Forest, further adds, "this grapple, in addition to good tree selection in forest thinning, will leave your woodlands more productive for timber, forage, and aesthetics".

Hannah produced his version of the "Blackfoot Grapple" in his shop south of Eddie's Corner, and is actively seeking new orders. If you are interested in learning more about the capabilities of the "Blackfoot Grapple", contact Wayne Hannah in Moore, Montana (406) 374-2338, or Hank Goetz/Frank Maus at the Lubercht Forest at (406) 244-5524. Information on forest thinning techniques and possible cost-sharing is available from the Service Forester at the nearest Montana Department of State Lands Office.



GRAPPLE, BLACKFOOT

NEW PUBLICATIONS

Montana's Guide to Permits for Biomass Energy Many individuals, businesses, and municipalities are interested in developing biomass energy projects. In planning and developing a project there are federal, state, and local laws and regulations that effect such projects. There are applications to file, time deadlines to meet, requirements to comply with, and project information to file with the appropriate authorities. This guide is designed to help people with the permitting process,and can be obtained by contacting the Montana Department of Natural Resources and Conservation, 1520 East Sixth Avenue, Helena, Montana 59620.

A Guide To Exporting Solid Wood Products This handbook provides a guide for U.S. wood products producers to develop a successful export marketing strategy. It covers how to obtain accurate and up-to-date export marketing information, so that the production, scheduling, and shipping of U.S. wood products can be done profitably. This publication can be obtained by contacting the Montana Forest Products Bulletin editor.

1987 Directory of Montana's Forest Products Industry This directory lists many of the sawmills, post & pole, houselog, and particle board and paper manufacturers operating within Montana. The directory has been compiled from information collected by field foresters of the Montana Department of State Lands. It is intended as a marketing aid for those seeking to locate products and services. The directory lists the company name, phone, contact person, size of operation, species processed, and products manufactured. To obtain a copy of this publication send $2.00 to the Department of State Lands, 2705 Spurgin Road, Missoula, Montana 59801.

1987 Directory of Montana's Forest Industry Contractors This directory is published for individuals and companies seeking timber harvesting, loading, and hauling services. It lists the names, addresses, and phone numbers of 148 logging companies, and includes their harvesting method, operating range, and production capacity. To obtain a copy of this publication send $2.00 to the Department of State Lands, 2705 Spurgin Road, Missoula, Montana 59801.

The new Standard Specifications for Road and Bridge Construction, adopted by the Montana Department of Highways and the Montana Highway Commission are available. All contractors, subcontractors, suppliers, and others can obtain a copy by sending $10.00 to: State of Montana, Department of Highways, Contract Plans Section, Helena, Montana 59620.

People and Productivity: Keys to a Successful Harvesting Operation. This 137 page proceedings focuses on changes taking place in the management of harvesting operations and the technology of harvesting systems. Topics include organizing people and machines to optimize productivity; training and development of maintenance personnel; emerging technologies in harvesting, transportation and merchandising; and integrating corporate planning processes from the forest to the market. Available for $18.00 from the Forest Products Research Society, 2801 Marshall Ct., Madison, Wisconsin 53705. Phone (608) 231-1361.

FOR SALE EQUIPMENT & PRODUCTS

Ramey R.A.135 loader, on carrier, excellent condition, ready to go! Contact, R&V Logs & Lumber, Dillon, Montana. Phone: (406) 681-3137.

Newer Mobile Dimension Sawmill, has electric start and twelve volt lift system and will saw lengths to 26'. The mill sits on portable trailer and is in excellent condition. An older Bellsaw planner with an 8 HP gas engine is also for sale for $525.00. Contact Mike Stewart, P.O. Box 653 Lincoln, Montana 59639. Phone: (406) 362-4658.

Brush Blades, custom fabricated swing type blades for all makes of crawler tractors and skidders. Precision flame cut alloy teeth and unique quick attachment features. Contact: Gregg Collier in Superior at (406) 822-4777, or Peter Martin at (406) 822-4378.

1972 Western Star log truck, completely overhauled with 1973 steel craft trailer, and 1978 Crown 3000 self loader. Contact: Dave Rodems at Rodems Trucking, Box 69, Jefferson City, Montana 59638. Phone: (406) 933-8566.

Corley #1 circle sawmill. All steel constructed track and carrage, 2 7/16" dia arbor 36" saw. Available with or without 65 HP electric motor. Also have scragg mill powered by 671 Detroit Diesel, $7,000. Contact Arron Jones, Flathead Post & Pole, Dixon, Montana. Phone: (406) 246-3591.

Used Parts for any make skidder including John Deere, IHC, Clark, Timberjack, Treefarmer, Drott, and Franklin. Skidders: Tree Farmer - C5C $9400, C4D $9800, C7D Grapple $23,500, 225D 10,500, 230D $11,750, 240D $15,800, John Deere 440C Cable $17,500, 540B $18,750, 540 Grapple $24,500, Drott 40 Feller Buncher $38,500, More equipment not listed. Contact Ron at Midwest Tractor Inc., Hwy 10, 4 miles west of Big Lake, Minnesota 55309. (612) 263-3777 or evenings 295-5037.

Micro thin wooden business cards, same dimensions as standard business cards but made of double thin veneers! Very reasonably priced at $98.00 per 500 and $ 138.00 per 1,000. Contact Falcon Rule Company, 45 Hutchins St. Auburn, Maine 04210. Phone: (207) 784-4041.

MEETINGS

Forest Industries Clinic And Machinery Show. March 4-6, Memorial Coliseum, Portland, Oregon. For more information contact JoAnn Tingley, Forest Industries, (415) 397-1881.

Plywood Manufacturing Short Course. March 16-20, Corvallis, Oregon. For more information, contact conference assistant, College of Forestry, Oregon State University, Corvallis, Oregon 97331-5704. Phone: (503) 754-2004.

Intermountain Saw Filers Convention. March 27-28, Spokane Sheraton, Spokane, Washington. For more information contact George Miller, Missoula Saws Inc., 2301 Grant, Missoula, Montana 59801, (406) 721-2580.

Second Annual Forest Products Exposition. April 11-12, Southgate Mall, Missoula, Montana. For more information contact Lee Cox. Trade Show Producer at (406) 728-1916.

The 42 Annual Northwest Wood Products Clinic will be held April 27-29, at the Outlaw Inn in Kalispell, Montana. The program is geared for wood products managers, supervisors, and production personnel. Topics for discussion are: Computerized Preventative Maintenance, Electronic Troubleshooting, Cutting Tool Care, Filing and Maintenance, Plant Engineering and Wood Products Residue. For more information contact the Conference & Institutes, Washington State University, Pullman, Washington 99164-5220. Phone: (509) 335-2946.

SAW SIMULATION PROGRAM AVAILABLE

Sawing Simulation Analysis (BOF):

Sawing Simulation Analysis (SSA) is a computer program that allows you to simulate sawing logs under specified milling conditions. In the past, log diagrams were drawn by hand to simulate log sawing. This was an inaccurate and time consuming method. The sawing simulation program is a spin-off of the USFS Best Opening Face program developed at the Forest Products Laboratory.

SSA can be used to analyze your lumber recovery improvement potential. You can compare your current Lumber Recover Factor (LRF) to what you might call your "maximum LRF" as determined by the BOF program. It can also be used to analyze down stream piece count flow.

With SSA, you can control the following 21 variables.

1. Saw setting increment
2. Minimum and maximum log length
3. Log and cant face opening increment
4. Minimum log required for cant
5. Sawing variation allowance
6. Sawing method, cant or live
7. Lumber sizes, green or dry
8. Maximization, dollars or volume
9. Cant breakdown method, split or full
10. Cant breakdown fence, fixed or variables
11. Edging method, trimback or full length
12. Narrowest piece allowed
13. Shortest piece allowed
14. Headsaw kerf
15. Log diameter increment
16. Cant breakdown kerf
17. Tangential shrinkage
18. Dressing allowance
19. Offset positions
20. Lumber dimensions
21. Log breakdown method

Output from SSA includes by log: LRF, BOF distance from center of log, sawing sequence, offset and piece count. The BOF program can maximize either dollar value or log volume.

For more information, contact the Market Bulletin Editor.

NEWS OF INTEREST FROM STONE CONTAINER

PACKAGING - Strong efforts by the industry to promote the advantages of the paper bag have stabilized the market for kraft papers for the present. With a current five-week inventory, linerboard will have high operating rates. Food packaging represents 30 percent of the market for kraft and paperboard.

Reflecting continued expansion in the fiber box market, capacity to produce unbleached kraft paperboard is expected to increase 1.6 percent a year in the next three years. This growth is also somewhat slower than the 2.4 percent a year gain experienced in the preceding decade. "The last greenfield kraft linerboard mill came on line in 1981 and all increases in capacity since that time have been achieved through expansions in existing mills," Norma Pace, American Paper Institute's Sr. Vice President, advises.

If you wish to advertise a forest product or a piece of wood-processing machinery in this bulletin complete the form below. No charge is made for this service. If you wish to rerun an item, a written request must be submitted before the next issue.

NAME OF PERSON OR FIRM: _____

MAILING ADDRESS: _____

ZIP CODE: _____ PHONE: _____

Type or print your advertisement in the space below, detach and return to:

Department of State Lands
Division of Forestry
Forest Products Bulletin
2705 Spurgin Road
Missoula, MT 59801

DEPARTMENT OF STATE LANDS
DIVISION OF FORESTRY
2705 Spurgin Road
Missoula, MT 59801

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